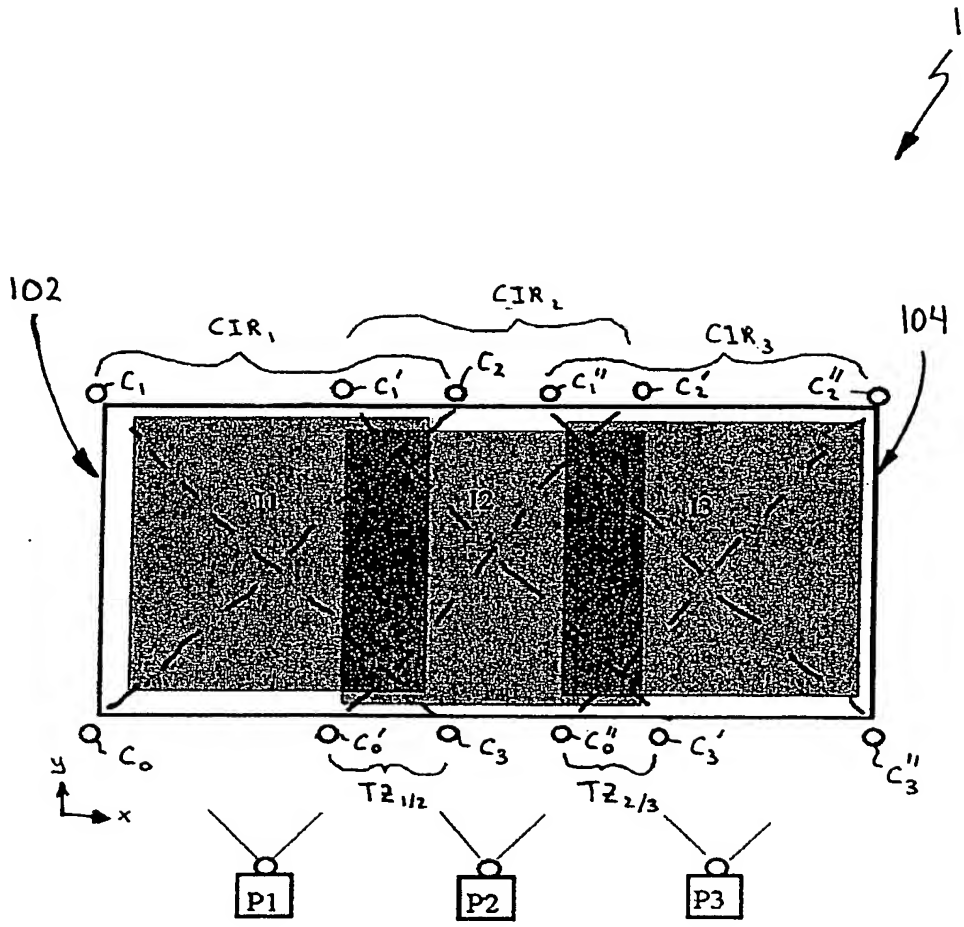


Fig. 1

BEST AVAILABLE COPY

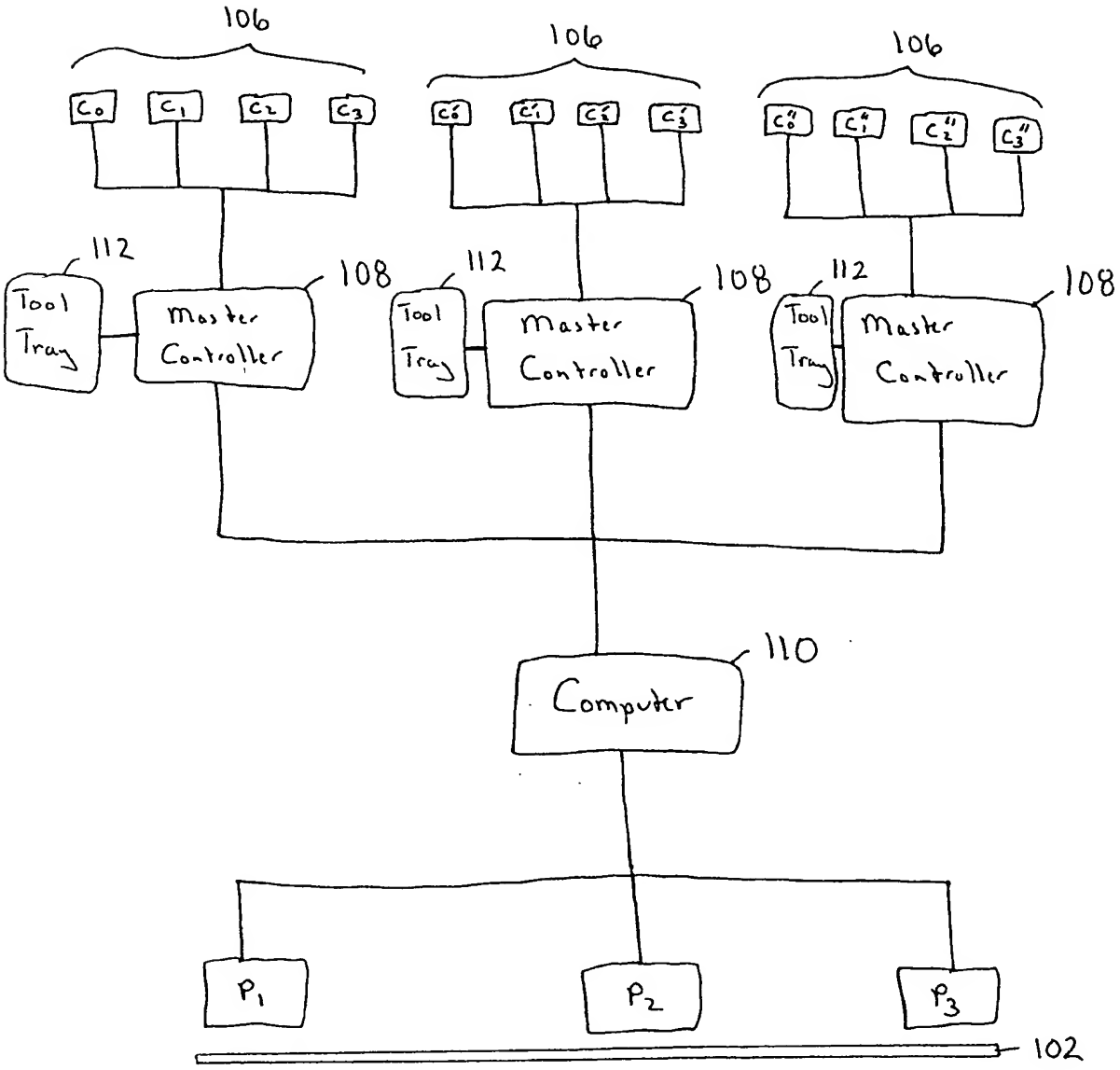

106
106
106
C_0 C_1 C_2 C_3
C_0' C_1' C_2' C_3'
C_0'' C_1'' C_2'' C_3''
112
112
112
Tool Tray
Tool Tray
Tool Tray
108
108
108
Master Controller
Master Controller
Master Controller
110
Computer
P_1
P_2
P_3
102

Fig. 2

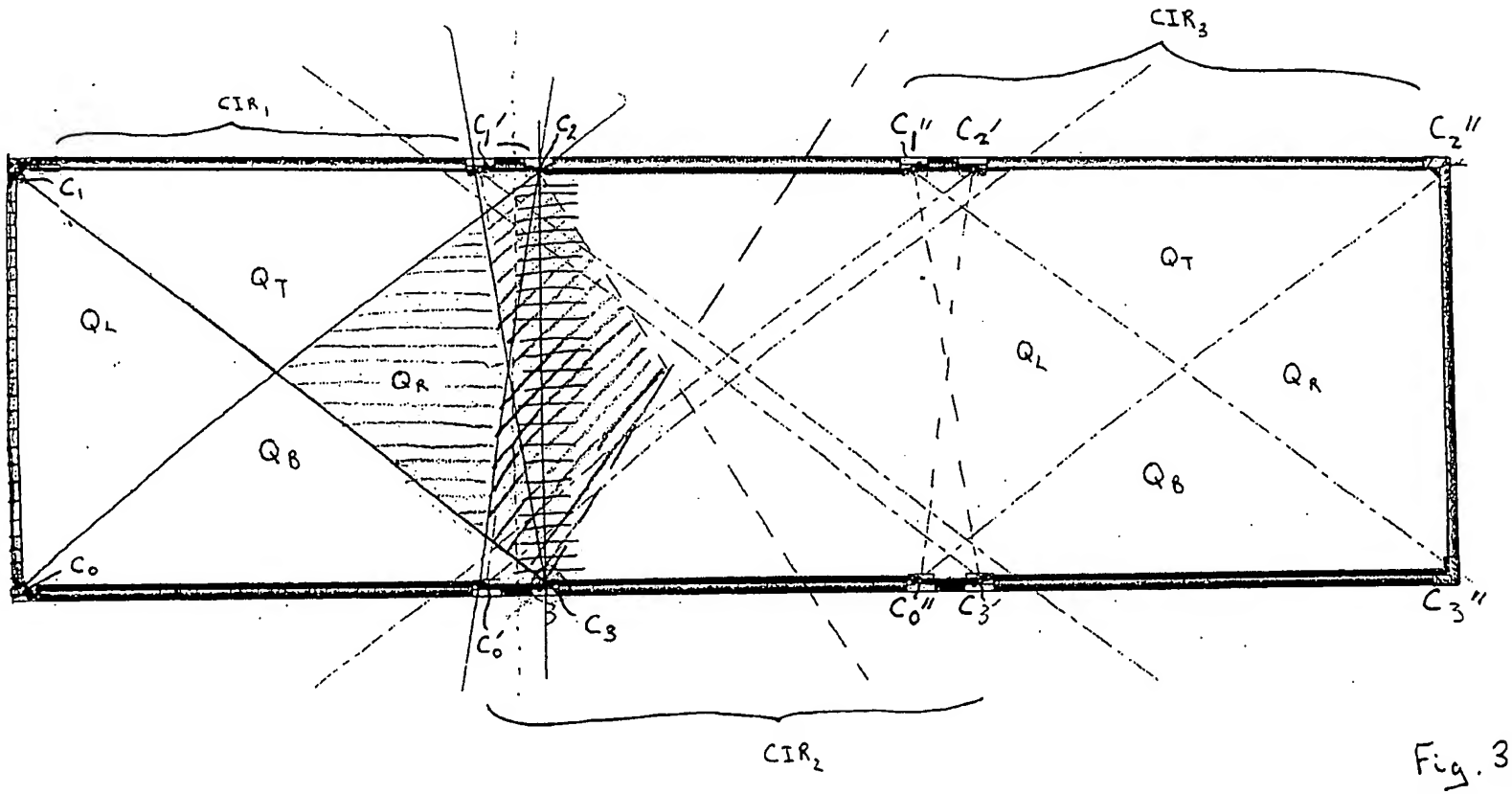


Fig. 3a

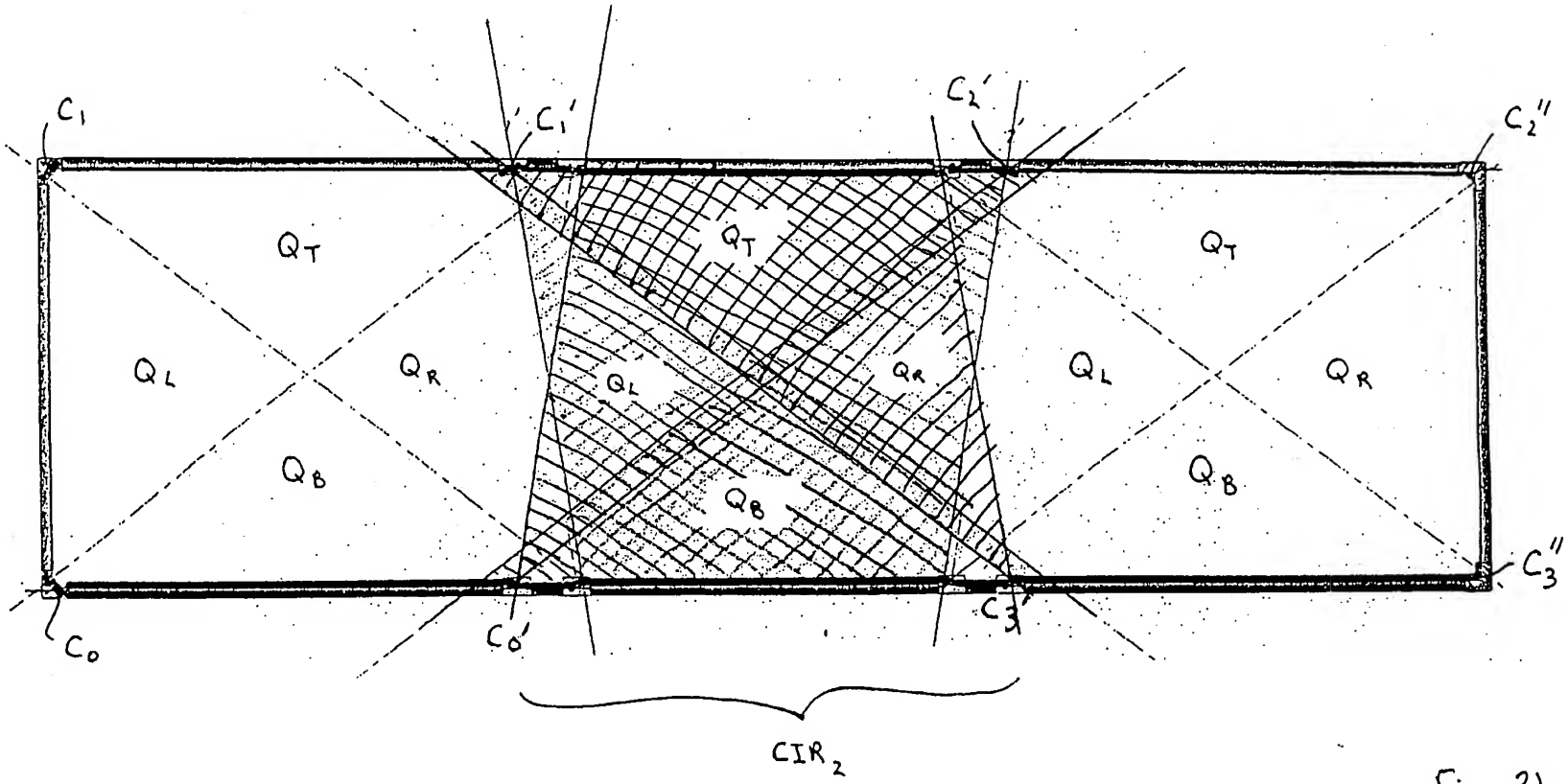


Fig. 3b

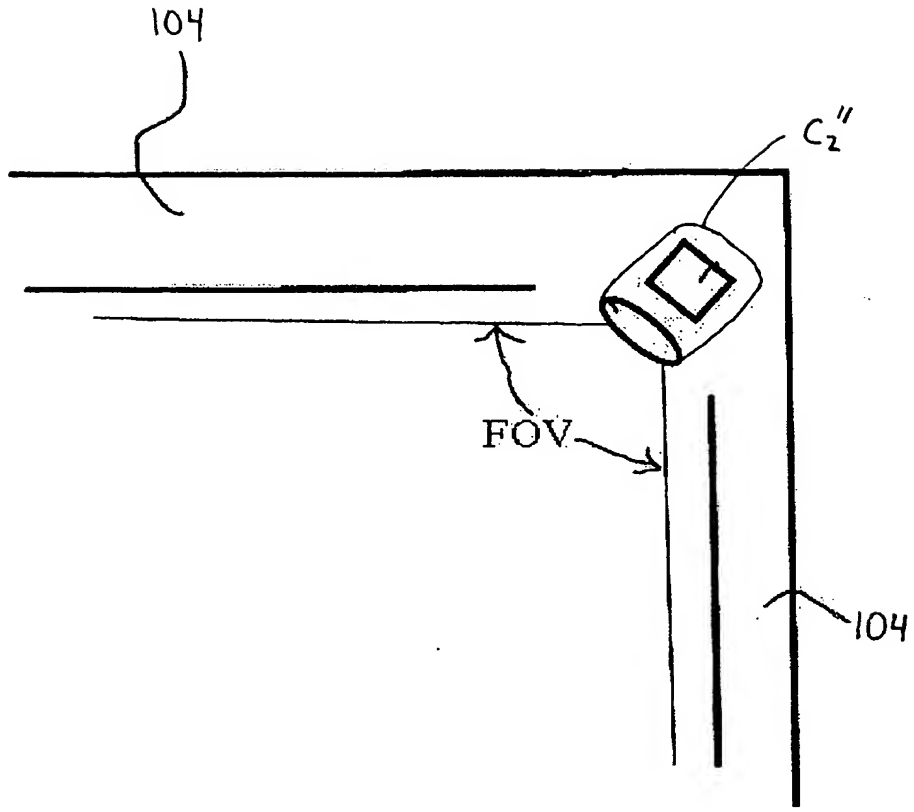


Fig. 4a

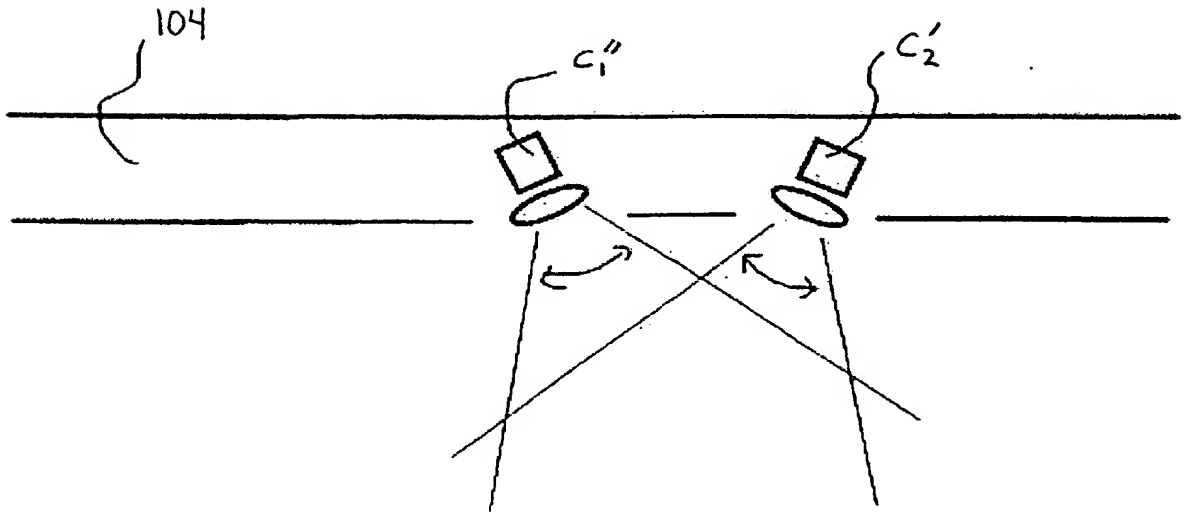


Fig. 4b

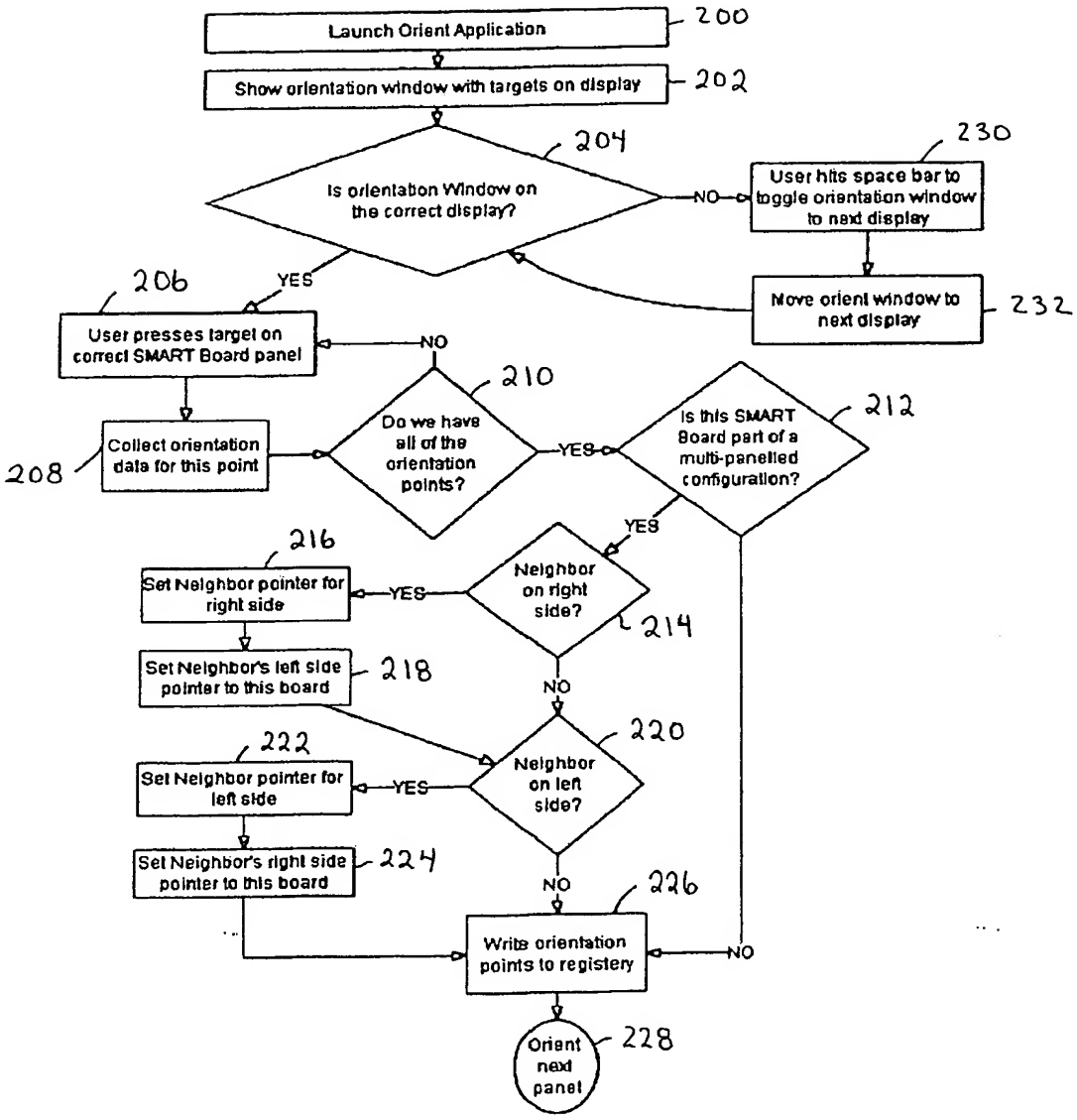

Launch Orient Application
200
Show orientation window with targets on display
202
Is orientation Window on the correct display?
204
NO
User hits space bar to toggle orientation window to next display
230
Move orient window to next display
232
YES
User presses target on correct SMART Board panel
206
NO
Collect orientation data for this point
208
Do we have all of the orientation points?
210
YES
Is this SMART Board part of a multi-panelled configuration?
212
YES
Neighbor on right side?
214
YES
Set Neighbor pointer for right side
216
Set Neighbor's left side pointer to this board
218
NO
Neighbor on left side?
220
YES
Set Neighbor pointer for left side
222
Set Neighbor's right side pointer to this board
224
NO
Write orientation points to registery
226
NO
Orient next panel
228

Fig. 5

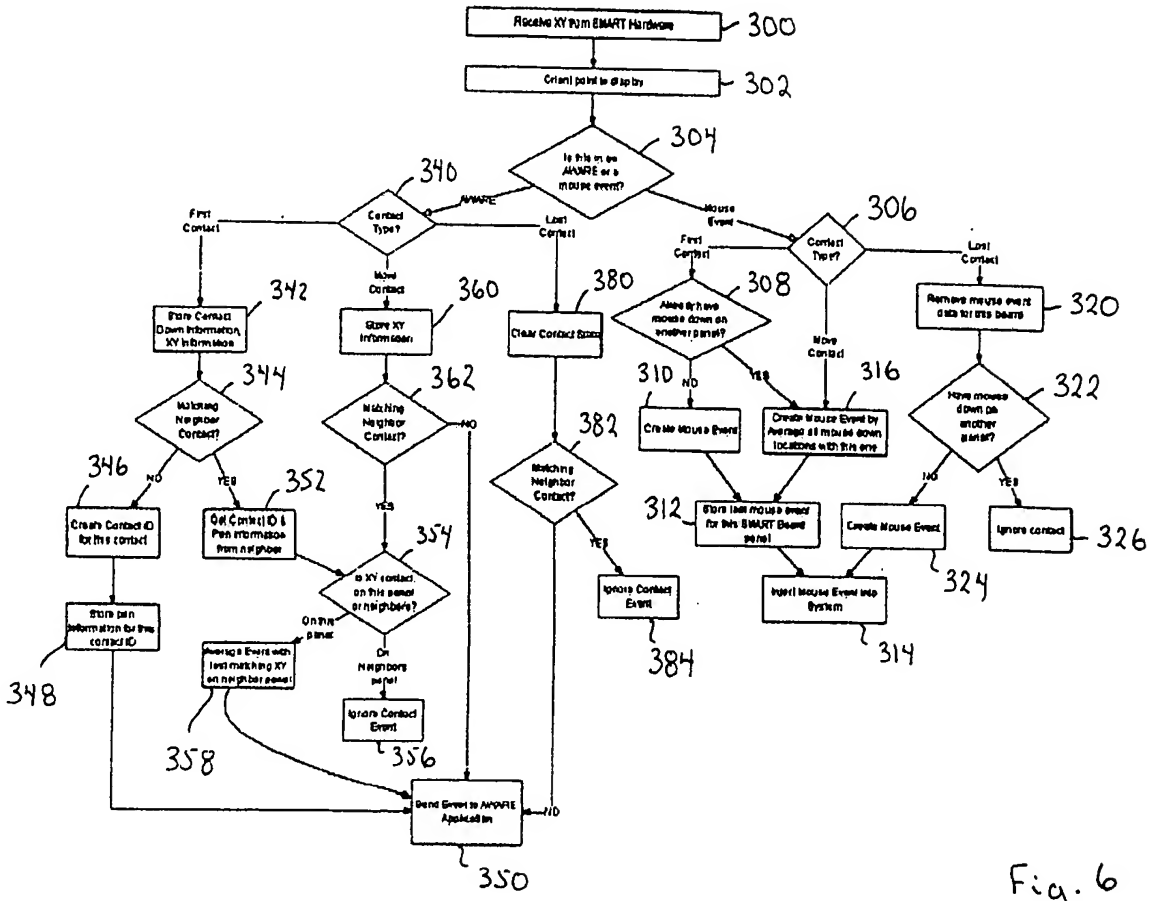

Receive XY from SMART Hardware
300
Orient point to display
302
Is this an MMARE or a mouse event?
304
340
Contact Type?
MMARE
Mouse Event
First Contact
Last Contact
Move Contact
306
Contact Type?
First Contact
Last Contact
Move Contact
342
Store Contact Down information, XY information
360
Store XY information
380
Clear Contact Stack
308
Above/Below mouse down on another panel?
320
Remove mouse event data for this board
344
Matching Neighbor Contact?
362
Matching Neighbor Contact?
382
Matching Neighbor Contact?
310
NO
316
322
Have mouse down on another panel?
346
NO
352
YES
354
Is XY contact on this panel or neighbors?
On this panel
On Neighbors panel
312
Store last mouse event for this SMART Board panel
Create Mouse Event
Ignore contact
326
324
348
Store pen information for this contact ID
Average Events with last matching XY on neighbor panel
Ignore Contact Event
Ignore Contact Event
Insert Mouse Event into System
314
384
358
356
Send Event to MMARE Application
NO
350

Fig. 6

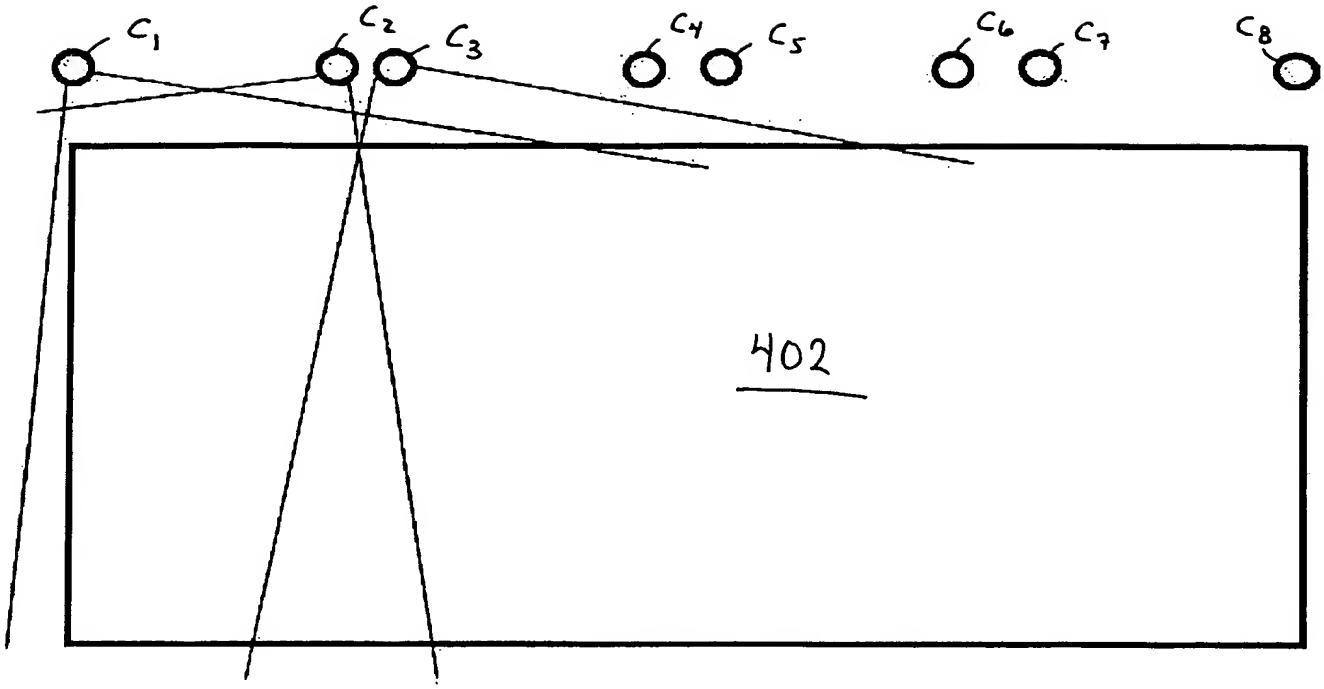


Fig. 7

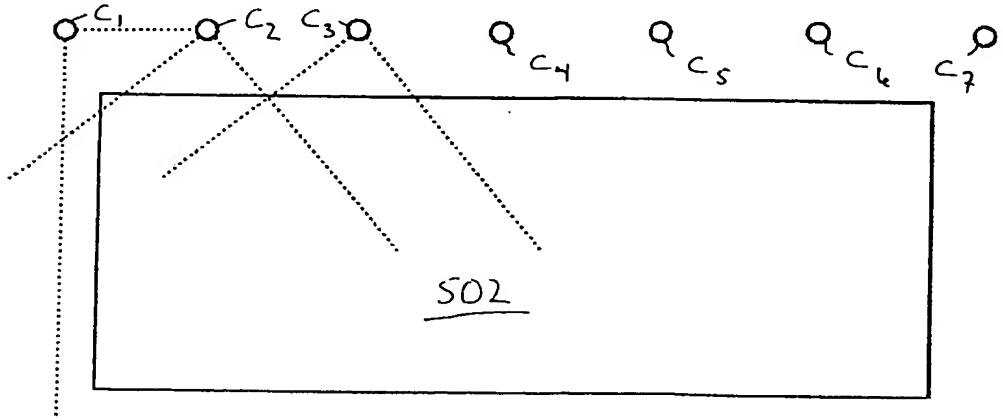
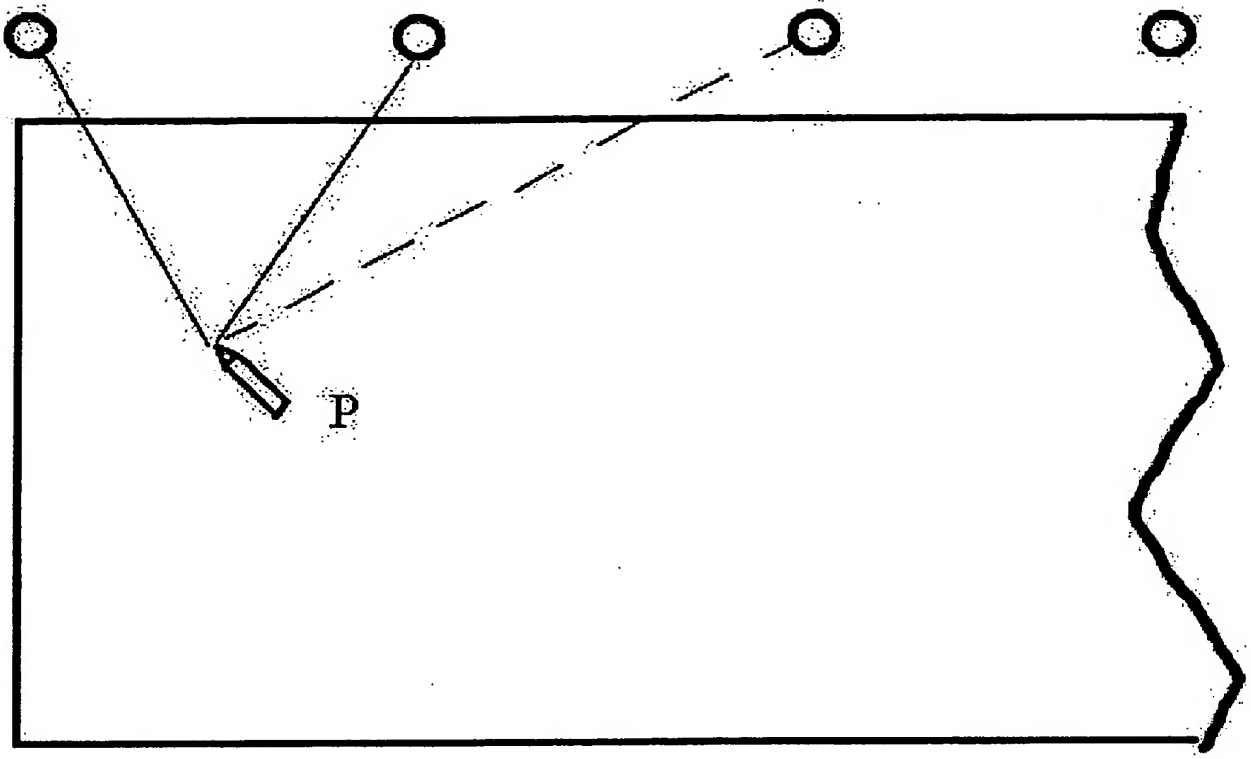
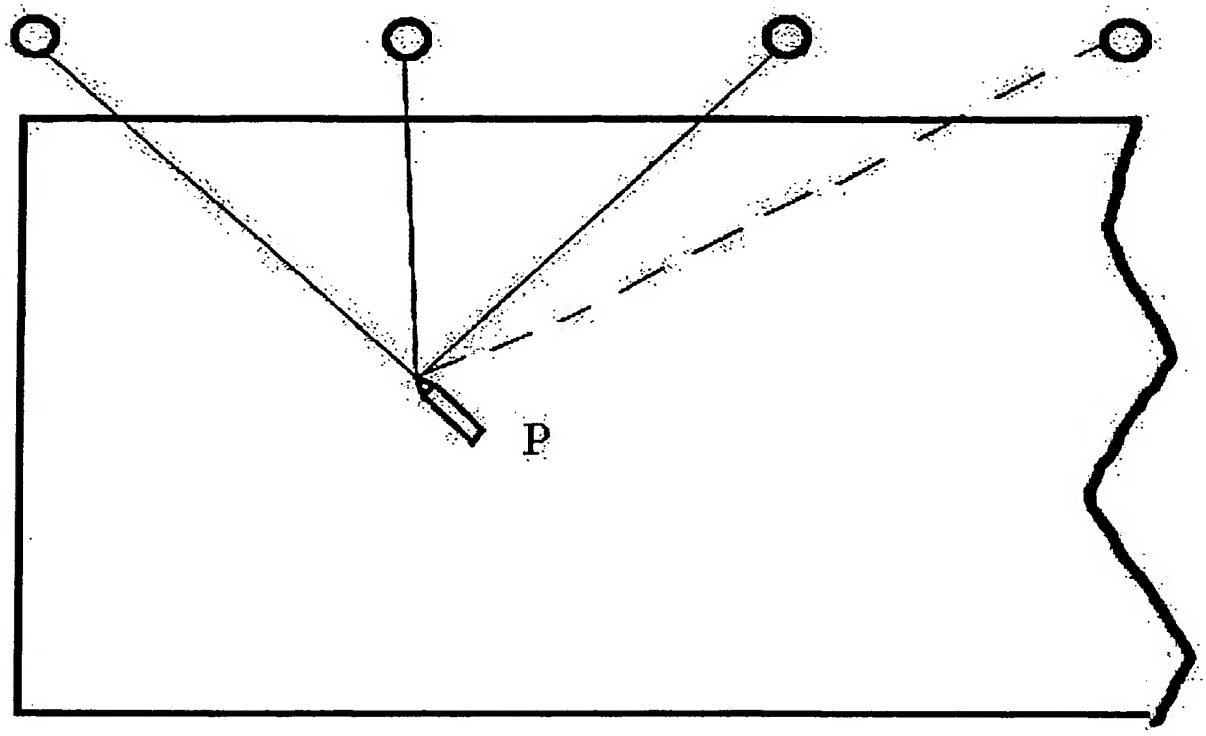


Fig. 8



Primary triangulation pair: C1+ C2
Camera C3 may see pointer P
C3 may: - Ignore pointer P (too far away)
- Passively track pointer P
- Assist in triangulation of pointer P
(C1 + C3, C2 + C3)

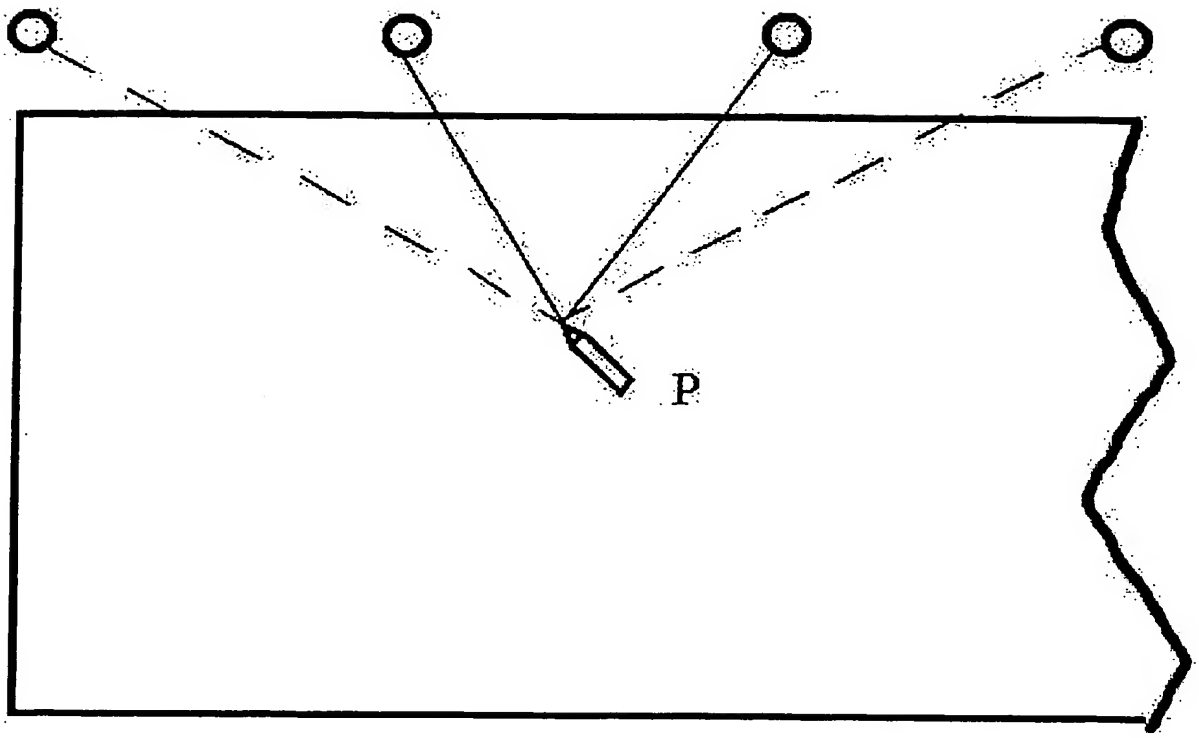
Fig. 9a



Primary triangulation pairs: C1 + C2, C1 + C3, C2 + C3
Camera C4 may see pointer P

C4 may:
- Ignore pointer P (too far away)
- Passively track pointer P
- Assist in triangulation of pointer P (C1+C4, C2+C4, C3+C4)

Fig. 9b



Primary triangulation pair: C2 + C3
Cameras C1 and C4 may see pointer P
C1 & C4 may: - Ignore pointer P (too far away)
- Passively track pointer P
- Assist in triangulation of pointer P
C1+C2, C1+C3, C1+C4
C2+C3, C2+C4
C3+C4

Fig. 9c